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ABSTRACT

The Graduate College at Stout State University is considering an option to the present A-F grading system called "Mastery Grading," based on a concept called "teaching for mastery." This involves carefully defining each course in terms of the specific competencies which the student is expected to develop as a result of instruction. Mastery grading is accomplished through evaluation devices which require the student to exhibit behavior that demonstrates he possesses the competencies. The purpose of this study was to determine the extent to which courses taught and graded according to the mastery concept would be accepted by other universities where Stout students might transfer credits or pursue further work. Sixty-two questionnaires were sent to individuals in charge of programs in audio-visual education, guidance, school psychology, industrial education, home economics, vocational education, clothing and textiles, and food service and nutrition at 40 institutions, of whom 47 responded. Questions were asked regarding (1) the probable institution policy with regard to transfer of graduate credit where a grade of "M" (mastery) was awarded; (2) the institution's likely policy with regard to allowing students with a master's degree, obtained in a program which was graded "M", to pursue a specialist or doctoral degree program; and (3) the individual's professional opinion about the concept of mastery grading in graduate courses. The results indicated that there would be relatively little difficulty for students graded with "M's" in transfering to other institutions. (AF)

ED049712

TRANSFERABILITY OF GRADUATE WORK GRADED ACCORDING TO MASTERY

(A Survey of Selected Graduate Faculty & Institutions)

The Graduate College

Stout State University

Robert Swanson, Dean

June 1970

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STATEMENT OF THE PROBLEM

The Graduate College at SSU is considering an option to the present A-B-C-D-F grading system. The proposed system is called "Mastery Grading" and is based on a concept which has come to be called teaching for mastery.

Teaching for mastery involves carefully defining each course (though eventually "courses" may be dropped) in terms of the specific competencies which the student is expected to develop as a result of instruction. Mastery grading is accomplished through evaluation devices which require the student to exhibit behavior which demonstrates that he possesses the competencies.

When a student has successfully demonstrated all the competencies specified for a given course, he is awarded "M" (mastery). If a grade is required prior to achievement of all competencies - - at the "end" of a course, for example - - he is awarded "I" (incomplete).

Because this system is quite different from those commonly used in graduate colleges, it was felt desirable to determine the extent to which courses taught and graded according to the mastery concept would be accepted by other universities to which Stout students might transfer credits or pursue further work.

This is the report of a questionnaire study of selected universities as regards their policies, or predicted policies, toward transfer of "M" graded work.

PROCEDURES

1. An explanation of teaching for mastery and mastery grading was prepared. The statement was criticized by several instructors who have been developing instruction under this concept; a revised two-page statement resulted.
2. A one-page questionnaire was developed in similar fashion to elicit reactions to the possible acceptability of the concept and its application at Stout State University.
3. A jury of experts was selected by asking each of the ten directors of graduate programs at Stout to name five or six persons in charge of programs at other universities where students from specific Stout graduate programs might be likely to transfer credit towards a Master's degree or to pursue work beyond the Master's. The graduate deans at all Wisconsin State Universities and the University of Wisconsin were included also.
4. The explanation of mastery grading, the questionnaire, and a personal letter of transmittal were sent to the above named individuals.
5. Two weeks after the first mailing, a second set of materials and an appeal for response were sent to all persons who had not responded.
6. Results were tallied, individual comments summarized, and a report prepared.

POPULATION SURVEYED AND RESPONSES RECEIVED

Populations Surveyed

The jury named by directors of Stout graduate programs consisted of fifty-two persons in charge of university graduate programs in audio-visual education, guidance, school psychology, industrial education, vocational education, home economics education, clothing and textiles, and food science and nutrition.

In addition, it was decided to add the eight graduate deans from the other Wisconsin State Universities in the system of which Stout State University is a member and the deans of education from the University of Wisconsin at Madison and Milwaukee.

Because individuals rather than universities were selected, in some instances more than one person from a given institution was chosen.

In all, sixty-two questionnaires were sent to individuals in forty different institutions. A list of institutions and number of responses received from each is included in appendix A.

Responses

During the three weeks after the survey was mailed (March 5 to March 26, 1970), twenty-five questionnaires were returned. A second request to non-respondents produced twenty-two more returns.

Several persons wrote to say that they were referring the questionnaire to another office; some responses came from someone other than the person to whom it was sent. In two instances where

multiple questionnaires went to a given institution, all were referred to the graduate office and one response was sent.

Only five universities failed to return at least one questionnaire.

Summary of surveys and responses

Number of individuals to whom questionnaires were sent - - - 62

Number of individuals responding - - - - - - - - - - - - - - - 47

Number of institutions to which questionnaires were sent - - 40

Number of institutions from which at least one response was received - 35

RESULTS

The questionnaire posed three basic questions regarding the concept and application of mastery grading. Copies of the letters of transmittal, explanation, and questionnaire are in appendix B.

(1) What is likely to be your institution's policy with regard to transfer of graduate credit where a grade of "M" (mastery) is awarded?

(2) To institutions offering work beyond the master's level, if a student who holds an appropriate Master's degree applies for admission to an advanced degree program (sixth-year specialist or doctoral), what would be your policy towards work completed within his Master's program which was graded "M" (mastery)?

(3) What is your professional opinion about the concept of "Mastery" grading in graduate courses?

Transferrability of graduate credit where the "M" grade has been awarded.

When asked "What is likely to be your institution's policy with regard to transfer of graduate credit in a course where a grade of "M" (mastery) is awarded?", the following frequencies of response were recorded. Because the choices were not mutually exclusive, some forms contained two or more responses to the question; all persons checked at least one choice.

(1) The course would be transferrable if it met all other conditions required by our graduate school. - - - - - - - - 28

(2) The course would not be transferrable. - - - - - - - - - - 5

(3) The course could be transferred as an elective only. - - 0

(4) The course could be transferred only if part of a major.- 2

(5) A competency examination would be given to determine acceptability. - 3

(6) Really have no basis for an opinion. - - - - - - - - - - 6

(7) Other. Please explain briefly. - - - - - - - - - - - - - - 14

Individuals choosing to further explain their positions gave a variety of responses, some of them modifications of the controlled choices.

Eight persons said their university had no policy and that graduate council or departmental action would be required. Two said their programs allowed no transfer of credits towards a Master's degree. One indicated their policy required "B or better" and that "M" would have to be evaluated in relation to this; another administrator said simply, "I personally would much prefer to deal with the standard grading system."

Transferability of "M" Graded Credit (earned within a completed Master's degree) Towards a Specialist or Doctoral Program.

Respondents whose institutions offer degrees beyond the Master's were asked to answer the following question: "If a student who holds an appropriate Master's degree applies for admission to an advanced degree program (sixth-year specialist or doctoral), what would be your policy towards work completed within his Master's program which was graded "M" (mastery)?"

The thirty-six individuals from such degree granting institutions chose responses with the frequencies shown below. Again, because the choices are not mutually exclusive, the total number of responses is greater than thirty-six.

(1) If the student holds a Master's degree, the grading system used for courses in the program would have no effect on transfer toward a specialist or doctoral program. - - - - - 10

(2) Credit would not be given for courses graded "M": additional courses would be required in their place. - - - - - 2

(3) Our policy is to review each case individually; the grading system would be only one of the factors considered in deciding on transfer. Simply because a course was graded "M" would not preclude its transfer, however. - - - - - - - 21

(4) Really have no basis for an opinion. - - - - - - - - - - - - 1

(5) Other. Please describe briefly: - - - - - - - - - - - - - - 4

Those who explained their policies further generally indicated that admission and award of assistantships requires some means of ranking students. Because the "M" grade does not provide this possibility, it would present them with admission problems, but this was no indication that the credit would not be accepted.

Professional Opinion of the "M" Grading System

The third general question requested each person to give his professional opinion of the basic concept of grading for mastery in graduate work. All persons wrote comments and ten enclosed letters explaining their positions in detail.

While it is difficult in all cases to classify the opinions, in general they seemed to be divided almost equally between those viewing the system as desirable and those considering it undesirable. Two statements illustrate the limits of the continuum: "Great - - I would like to see our graduate school move in this direction." "I honestly think it should be dropped - - and quick."

To aid in interpretation of opinions, all statements were first classified as generally favoring the concept or not. Following this rough classification, the statements were grouped as they expressed similar ideas. No frequency count was attempted. The purpose was simply to identify what respondents regarded as desirable and undesirable features of mastery grading.

A. Opinions Favorable to Mastery Grading

The majority of persons favoring the plan pointed out the value of specifying learning outcomes in terms of competencies which students are expected to develop.

1. Competency specification will improve instruction.

Several stated that the major desirable feature of mastery grading is that it requires teachers to carefully define what they expect students to get from their instruction. Evaluation of the achievement of expected competencies will aid the student in identifying and correcting specific learning problems.

2. Competency specification provides a more complete description of the student.

   Transcripts which simply show course titles and grades reveal little about the competencies which a student may have developed as a result of instruction. The mastery system described would provide not only course titles but detailed lists of the competencies possessed by the student. Especially for job placement this would be desirable.

3. Competency specification by instructors has value to the university.

   The careful attention to expected results in terms of student competencies will give the university a better picture of what its faculty is trying to accomplish. It will provide a base for interpreting its role to the public and a criterion for accountability.

4. Grading for mastery moves away from competition among students.

   Several criticized competitive grading systems as leading to undesirable learning practices among students. They commended the idea of the student being clear on what he is trying to master and making such mastery accessible to all. One said simply, "It removes the tyranny of grading."

B. Opinions Unfavorable to Mastery Grading

A variety of objections were raised. Some were rather basic disagreements with the concept of mastery grading and others were concerned with the difficulty of its administration.

1. <u>The accomplishments of students are different and grades awarded should reflect this fact</u>.

   Several respondents wrote statements indicating that students achieve at different rates and to different levels and that we should recognize, accept, and report this in a grading system. If all students are given the same grade when they complete the work, there will be no way of specifying differences among students. Several felt this to be a limitation of all "accept or reject" systems.

2. <u>Grading systems which emphasize competition among students motivate learning</u>.

   Several respondents implied that A-B-C systems tend to rate students in terms of their relative achievement within the group, setting up a competitive situation. In their view such competition enhances learning and is thus desirable; intra-class competition would be eliminated in the mastery grading plan and would tend to reduce the general level of achievement.

3. <u>Advanced specifications of expected competencies creates inflexibility in courses</u>.

   Because mastery grading requires very careful definition of objectives in behavioral terms, some felt that there would be little opportunity for cooperative development

of objectives by students and faculty at the beginning of the course. There is also the possibility that, once carefully defined, objectives will never be changed.

4. <u>There is doubt that learning can be described in this way and that valid evaluation devices can be prepared</u>.

   One or two questioned the possibility of defining objectives as expected behaviors and also questioned the feasibility of developing valid evaluative instruments.

5. <u>The effort involved to carefully specify what constitutes mastery would be better expended on other activities</u>.

   Respondents correctly assumed that a great deal of faculty time and effort will be required to specify competencies in operational terms. Some commented that many college teachers do not know how to specify learning outcomes in this manner and that their time would be better spent doing other things.

6. <u>Any new grading system will create problems of communication and administration</u>.

   A large number of universities now use the A-B-C system of grading and have policies of admission, transfer, graduation, and award of assistantships based on this system. A change will create confusion and may work against individual students.

Many universities have an option of "pass-fail" or "satisfactory-unsatisfactory"; the mastery system is viewed by some respondents as simply another version of the two-point scale. Some view two-point scales as undesirable generally and those who do not see no need for an additional plan of this type.

CONCLUSIONS

While there is varying opinion about the concept and application of mastery grading it appears that the student would experience relatively little difficulty in transferring individual graduate courses simply because they had been graded "M" (mastery).

Students who hold a Master's degree made up of courses graded by the mastery system would likewise not find this a major deterrent to admission to a specialist or doctoral program at the institutions surveyed though they may be at some disadvantage in competition for assistantships if they cannot be conveniently ranked against other applicants.

Results of the study indicate that many support the concept of competency specification, but prefer differential grades.

APPENDIX A

INSTITUTIONS RESPONDING

TO THE QUESTIONNAIRE

Numbers of Responses Received From Various Institutions

Wisconsin State Universities:	
Eau Claire	1
Stevens Point	1
Platteville	1
River Falls	1
Superior	1
Whitewater	1
La Crosse	1
Oshkosh	1
University of Wisconsin - Madison	3
University of Wisconsin - Milwaukee	1
Oregon State University	1
Humboldt State College (California)	1
North Carolina State University	1
Western Washington State College	1
Iowa State University	3
Ohio State University	3
University of Minnesota	2
California (Pa.) State College	1
Pennsylvania State University	2
West Virginia State University	1
Syracuse University	1
University of Nebraska	2
Arizona State University	1
University of Illinois	2
Winona (Minn.) State College	1
University of Northern Iowa	1
Cornell University	1
Michigan State University	1
University of Kansas	1
University of Missouri	1
Texas A & M University	1
University of Maryland	1
Colorado State College	1
University of Wyoming	2
Kansas State University	2
Total	47

APPENDIX B

SURVEY FORMS AND LETTERS

March 5, 1970

Dear

The Graduate College of Stout State University is developing a different plan for marking students in graduate courses, a plan which is based upon the concept of mastery learning.

This is to solicit your reaction to the idea and to get some information on the likelihood of your institution's accepting for transfer graduate courses graded by this system.

Two enclosures are included. The first is an explanation of the proposed system. The second in a one-page questionnaire providing some structure for your response. We will appreciate any other reactions you have as well. A self-addressed envelope is enclosed.

Sincerely yours,

Robert Swanson
Dean of The Graduate College

RSS:ja

Enc.

March 26, 1970

Dear

Approximately three weeks ago I sent you a rationale for a modified grading system we are proposing to use with graduate courses at our university and a questionnaire for your reaction to it.

To my knowledge, your response has not been received. I would appreciate it very much if you could find time to give us your reaction to the plan.

An additional copy is enclosed for your convenience.

Sincerely yours,

Robert Swanson
Dean of The Graduate College

RSS:ja

Enc.

To: Selected Persons in Graduate Education

From: The Graduate College, Stout State University, Menomonie, Wisconsin

Re: An Explanation of "Mastery" Grading in Graduate Courses

The Graduate College of Stout State University is experimenting with a system of grading based on the concept of mastery learning. The basis for this idea in one of its most recent forms is explained by Bloom.

> Most students (perhaps over 90 percent) can master what we have to teach them, and it is the task of instruction to find the means which will enable our students to master the subject under consideration. Our basic task is to determine what we mean by mastery of the subject and to search for the methods and materials which will enable the largest proportion of our students to attain such mastery.[1]

Stout State University's plan for implementation requires an instructor or department wishing to use the system to define the course(s) in terms of specific behavioral objectives and prepare evaluation devices which cause the student to exhibit the defined behaviors. Thus, evaluation is based on whether the student attains the objective (exhibits the behavior) not how he compares with the rest of the class.

When the student has successfully shown mastery of all objectives, he is awarded "M", indicating mastery as defined. An "I" (incomplete) indicates that the student has not yet attained mastery of all competencies required of the course. Hence, this is quite unlike many so-called "Pass-Fail" systems.

The student's transcript will show the name and number of the course, the semester hours of credit awarded, and a grade of either "M" or "I".

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[1]Benjamin S. Bloom. "Learning for Mastery," Evaluation Comment, Vol. 1, No. 2, University of California at Los Angeles: Center for the Study of Evaluation of Instruction Progress, May, 1968.

Further, anyone requesting it could obtain a list of the competencies on which the student has demonstrated mastery, providing a fairly detailed operational definition of course content.

It is our intention to make this optional at our institution and at first it is likely that a majority of our courses will continue to use the A-B-C-D-F system. However, if results are successful, we hope that mastery grading will eventually become our common procedure.

Basically, our question is: "Would your college or university be likely to accept transfer credit in courses graded by this plan?"

In interpreting your answers to this question, it is understood that the grade awarded in a course is only one factor in determining acceptability for transfer. Most universities also require that the following conditions be met:

(1) Graduate credit is shown on an official transcript from an institution accredited for this level of work.

(2) The amount of credit is specified in semester or quarter hours.

(3) The content of the course must be appropriate to the program to which it is to be transferred.

(4) The course was completed within the past 5 to 7 years (or some other stated time).

(5) There is a limit to the amount of transferred credit which may be applied towards a degree program. (Eight credits is common for master's work; often a 30-credit master's degree may be used toward a doctorate.)

(6) Official transfer may not be effected until a given amount of work has been satisfactorily completed at this university.

Your response on the following questionnaire will be appreciated. It is understood that your answers will in no way be considered binding in individual cases.

1. What is likely to be your institution's policy with regard to transfer of graduate credit in a course where a grade of "M" (mastery) is awarded? (Check one or more of the following responses.)

___ The course would be transferrable if it met all other conditions required by our graduate school.

___ The course would not be transferrable.

___ The course could be transferred as an elective only.

___ The course could be transferred only if part of the major.

___ A competency examination would be given to determine acceptability.

___ Really have no basis for an opinion.

___ Other. Please describe briefly: _____

_____

2. This question applies only to institutions which offer degrees beyond the master's (sixth-year specialist or doctorate).

Our college or university offers:
___ Doctor's degrees
___ Sixth-Year Specialist's degrees
___ Master's degrees

If a student who holds an appropriate master's degree applies for admission to an advanced degree program (sixth-year specialist or doctoral), what would be your policy towards work completed within his master's program which was graded "M" (mastery)? (Check one or more of the following responses.)

___ If the student holds a master's degree, the grading system used for courses in the program would have no effect on transfer toward a specialist or doctoral program.

___ Credit would not be given for courses graded "M"; additional courses would be required in their place.

___ Our policy is to review each case individually; the grading system would be only one of the factors considered in deciding on transfer. Simply because a course was graded "M" would not preclude its transfer, however.

___ Really have no basis for an opinion.

___ Other. Please describe briefly: _____

_____

3. What is your professional opinion about the concept of "Mastery" grading in graduate courses? (Use back of sheet if necessary.)

The above answers are not to be considered as binding on the institution in treating individual cases.

_____ Date: _____, 1970
(Name)

_____
(Title) (Institution)